

WHAT IS CLAIMED IS:

1. An electro-mechanical roll towel dispenser for dispensing measured towel sheets from a roll of the towel material, comprising:

a housing, and a roll carrier disposed in said housing to rotationally support the roll of towel material, said housing further comprising a dispensing slot defined therein through which measured sheets of the towel material are dispensed;

an electro-mechanical feed mechanism disposed in said housing to dispense the sheets of towel material therefrom, said feed mechanism having a first mechanical operational state wherein a sheet of towel material is dispensed by a user grasping and pulling on a tail of the towel sheet extending from said dispensing slot, and a second electrical operational state wherein a measured length of the towel material is electrically and automatically fed out of said dispensing slot to define a tail of the next sheet of towel material;

a motor disposed in said housing to drive said feed mechanism in said second electrical operational state.

2. The dispenser as in claim 1, further comprising a control circuit operably configured with said motor and said feed mechanism to automatically switch said feed mechanism between said first and second operational states.

3. The dispenser as in claim 1, wherein said feed mechanism comprises a feed roller driven by said motor in said second operational state of said feed mechanism and freely rotatable in said first operational state of said

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feed mechanism, and a pressure roller opposing said feed roller, the towel
5 material passing between said feed roller and said pressure roller.

4. The dispenser as in claim 3, further comprising a brake mechanism
operably disposed to said feed roller, said brake stopping rotation of said feed
roller upon a measured amount of towel material being pulled by a user so that
the towel material is then clamped between said feed roller and said pressure
5 roller.

5. The dispenser as in claim 4, wherein said brake mechanism is a
mechanical brake.

6. The dispenser as in claim 4, wherein said brake mechanism is
electrically actuated and further comprising a brake trigger device to activate
said brake upon a measured amount of sheet material being pulled by the user.

7. The dispenser as in claim 6, wherein said brake trigger device
comprises a revolution counter operatively configured with said feed roller.

8. The dispenser as in claim 4, further comprising a tear blade
disposed in said housing downstream of said feed roller and said pressure roller
in a running direction of the towel material whereby after being clamped between
said feed roller and pressure roller, the user severs the towel material into a
5 measured sheet by pulling the towel material against said tear blade.

9. The dispenser as in claim 8, further comprising a motor trigger
device to activate said motor subsequent to the towel material being severed so
that the tail of the next sheet is automatically fed out of said dispensing slot.

10. The dispenser as in claim 9, wherein said motor trigger device comprises a sensor disposed to detect movement of said tear blade upon the user pulling the towel material against said tear blade.

11. The dispenser as in claim 8, further comprising a motor-off trigger device to stop said motor upon a measured amount of towel material being feed out of said dispensing slot to define the tail.

12. The dispenser as in claim 11, wherein said motor-off trigger device comprises a revolution counter operably configured with said feed roller.

13. The dispenser as in claim 1, further comprising a power supply for said motor and a motor power switch, said switch being closed to supply power to said motor upon a measured sheet being severed from the towel material by the user, and being opened upon a measured amount of tail being extended from the dispensing slot by said feed mechanism.

14. The dispenser as in claim 13, wherein said feed mechanism comprises a feed roller driven by said motor in said second operational state of said feed mechanism and freely rotatable in said first operational state of said feed mechanism, and a pressure roller opposing said feed roller, the towel material passing between said feed roller and said pressure roller, and wherein said control circuit further comprises a revolution counter operatively configured with said feed roller to provide a trigger signal to open said motor power switch upon the measured amount of tail being extended from said dispensing slot.

15. The dispenser as in claim 14, further comprising a brake operably disposed between said motor and said feed roller, said revolution counter providing a signal to actuate said brake to stop rotation of said feed roller upon a measured amount of towel material being pulled by a user so that the towel material is then clamped between said feed roller and said pressure roller.

16. The dispenser as in claim 13, wherein said feed mechanism is configured to clamp upon the sheet material upon a measured length of the material being pulled by the user.

17. The dispenser as in claim 16, further comprising a tear blade disposed in said housing downstream of said feed mechanism in a running direction of the towel material whereby the user severs the towel material into a measured sheet by pulling the towel material against said tear blade, and a tear blade sensor that detects movement of said tear blade and generates a signal to close said motor power switch.

18. The dispenser as in claim 17, further comprising a sensor configured with said feed mechanism to generate a signal to open said motor power switch upon a measured amount of tail material being extended from said dispensing slot.

19. The dispenser as in claim 18, wherein said feed mechanism comprises a feed roller, said sensor comprising a revolution counter configured with said feed roller.

20. An electro-mechanical roll towel dispenser for dispensing measured towel sheets from a roll of the towel material, comprising:

a housing, and a roll carrier disposed in said housing to rotationally support the roll of towel material, said housing further comprising a dispensing slot defined therein through which measured sheets of the towel material are dispensed;

an electro-mechanical feed mechanism disposed in said housing to dispense the sheets of towel material therefrom, said feed mechanism having a first mechanical operational state wherein towel sheets are dispensed by a user grasping and pulling on a tail of a towel sheet extending from said dispensing slot, and a second electrical operational state wherein a measured length of the towel material is electrically and automatically feed out of said dispensing slot to define the tail of the next sheet of towel material, said feed mechanism including a feed roller driven in said second operational state of said feed mechanism and freely rotatable in said first operational state of said feed mechanism, and a pressure roller opposing said feed roller, the towel material passing between said feed roller and said pressure roller.;

a motor disposed in said housing to drive said feed roller in said second electrical operational state; and

a control circuit including a power supply for said motor and a motor power switch, said switch being closed to supply power to said motor upon a measured sheet being severed from the towel material by the user, and being

opened upon a measured amount of tail being extended from the dispensing slot by said feed mechanism.

21. The dispenser as in claim 20, wherein said control circuit further comprises a revolution counter configured with said feed roller, said revolution counter providing a signal to open said motor power switch upon the measured amount of tail being extended from said dispensing slot.

22. The dispenser as in claim 21, further comprising a brake operably disposed between said motor and said feed roller, said revolution counter providing a signal to actuate said brake to stop rotation of said feed roller upon a measured amount of towel material being pulled by a user so that the towel material is then clamped between said feed roller and said pressure roller.